Gender Scripts and Age at Marriage in India

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Abstract:

Research on marriage in developing countries has been somewhat narrow in scope due to both conceptual and data limitations. While the feminist literature recognizes marriage as a key institutional site for production and reproduction of gender hierarchies, little is known about the processes through which this relationship operates. This paper uses data from the newly collected India Human Development Survey, 2005 for 27,365 ever married women aged 25-49 to explore ways in which different dimensions of gender in Indian society shape the decisions regarding age at marriage. We explore the impact of three dimensions of gender: (1) Economic factors such as availability of wage employment, dowry expectations and wedding expenses; (2) Indicators of familial empowerment such as women's role in household decision making, access to and control over resources; and, (3) Markers of gender performance such as observance of purdah and male female separation in the household. Results from hierarchical linear models confirm the importance of markers of gender performance but fail to demonstrate a large role for economic factors and familial empowerment.

Key Words: Child marriage, India, Gender, Age at Marriage, Nuptiality

Introduction:

Theoretical literature on gender consistently recognizes that gender is multi-dimensional (Mason 1986; Narayan 2006; Malhotra, Schuler, and Boender 2002; Collins et al. 1993) however, in practice only limited aspects of gender have received attention. As Collins et al. (1993, p. 186) note, "most gender theories are based on a particular range of empirical materials. Thus, many theories appear to be at least partially true. The problem is that they are not comprehensive, and they lack explanatory leverage outside of a particular context." Demographic research, in particular, has tended to ignore the symbolic dimension of gender. This paper argues that inattention to symbolic aspects of gender lead to theoretical models which are poorly suited to studying marriage in developing countries.

Much of the literature on gender and marriage timing seems to rely on two dimensions of gender: (1) Sex role theory has been used to explain why marriage might be unattractive to women in societies characterized by unequal division of household responsibilities (McDonald 2000; Retherford, Ogawa, and Matsukura 2001). (2) Structural theories have been used to explain why economic independence associated with rising female labor force participation might make marriage optional rather than necessary for women (Oppenheimer 1988). Much of this emphasis on individual choice can be attributed to the geographic origins of this research where marriage is a matter of individual choice rather than a social arrangement between families. With rising individualism this approach has been strengthened and much of the literature in the United States and Europe focuses largely on the ways in which individual men and women negotiate the deeply personal decision regarding whether, when and whom to marry (Leseaghe and Sukryn 1988). However, even within these settings, there is some evidence that

2

cultural factors play an important role; historical studies of marriage timing in the US document considerable diversity by ethnicity (Landale and Tolnay 1993) and even in the modern day United States, ethnographic research documents that symbolic aspects of what marriage is supposed to represent makes many young mothers in committed relationships delay marriage until they can attain all their dreams (Edin and Kefalas 2005).

This paper argues that when it comes to studying societies in which families play an important – often dominant – role in the marriage process, it is particularly important to look beyond individual or even institutional aspects of gender inequality to focus on what marriage of a son or a daughter represents for parents. Marriage systems in many parts of the world, including southern Europe in the 18th and 19th centuries, have been dominated by the influence of the corporate family. In societies where individuals are closely linked to extended families, marriage decisions also retain the imprimatur of the family. Extended family residence and joint property holding often keep the economic fortunes of individuals tied to their families. But purse strings are not the only ties that bind; individuals' social nexus are often determined by the ties of kinship, caste and clan and family as well as caste/clan social status is enhanced or diminished by the selection of a marriage partner, age at marriage, and the manner in which marriage takes place (Thornton and Fricke 1987; Uberoi 1993; Bloch, Rao, and Desai 2004; Malhotra and Tsui 1996; Fricke, Syed, and Smith 1986). Individually driven modernization theories often fail to provide a satisfactory account of the linkages between gender and marital patterns resulting in calls for a focus on a better understanding of contextual factors (Malhotra and Tsui 1996; Niraula and Morgan 1996; Hirschman 1985).

3

A focus on symbolic aspects of gender is particularly relevant in the context of marriage timing in South Asia in general and India in particular. Marriage has historically been and remains universal (Das and Dey 1998), and while age at marriage has been rising slowly, largely through declines in child marriages, mean age at marriage remains below 20. Census data from 2001 show that less than 2% of men and one % of women remain unmarried. Moreover, 95% of women are married by age 25 and men by age 32. At the same time, India also represents substantial diversity in age at marriage, particularly for very early marriage. Even among recent cohorts of women aged 18-29, National Family Health Survey III documents that 52% of the women were married by age 18 in Uttar Pradesh while the comparable proportion was 25% in Tamil Nadu and 17% in Kerala (International Institute for Population Sciences and Macro International 2007). This regional diversity in marriage timing is accompanied by well recognized regional diversity in different dimensions of gender (Dyson and Moore 1983), allowing for an opportunity to examine the way in which different dimensions of gendered context might be linked to marriage.

Reconceptualizing Gender:

Several decades of scholarship – much of it from feminists – has left us with a rich legacy of perspectives for studying gender. However, as a series of reviews document (Watkins 1993; Thompson and Walker 1995; Ferree 1990; Riley 1997), translating these theoretical insights into empirical research has proven to be far more challenging. In the current context it is particularly difficult because our focus is on gendered context that affects the behavior of families rather than individuals.

Thinking about the impact of gender on familial decision making regarding children's marriage forces us to reconceptualize the nature of gender. Three distinct but interrelated streams of literature have interesting implications for this topic: (1) **Rational decision making** theories suggest that households respond to external constraints in ways that maximizes benefits to the household. Whether these benefits accrue to the household head or to all members remains a matter of lively debate but the focus of attention here is on institutional constraints that shape individual rationality, e.g. effect of prevailing differences in male and female wage rates on differential investments education of sons and daughters (Rosenzweig and Schultz 1982). (2) **Empowerment theories** focus on households, social institutions, market and state as sources of patriarchy as they explore women's subordination with particular focus on the interrelationship between objective resources and subjective sense of self efficacy and entitlement (Kabeer 1999; Malhotra, Schuler, and Boender 2002; Narayan 2006). (3) **Performance theories** suggest that that men and women engage in a visible display of gender where a stylized mode of interaction may indicate deference or dominance (Goffman 1976). This approach focuses on the symbolic nature of gender which shapes choices and limits actions based on the actor's sex and leads individuals to consistently act in a way that produces gendered behaviors in day-to-day interactions between individuals (West and Zimmerman 1987). Each of these can be adapted to the study of gender and marriage timing in the context of familial decision making.

Economic Rationality

Rational theories imply that parents respond to economic incentives and constraints as they choose optimal marriage timing for their daughters. It has been documented in different parts of Asia that availability of wage work for women increases the returns from daughters and

5

may lead to delayed marriage (Greenhalgh 1985; Wolf 1994). This is a particularly important consideration in India. Research on Indian labor markets has documented a high degree of underemployment for both men and women with very low wage employment rates. Among women aged 15 and above, only 16% of the rural women and 11% of the urban women claim wage work as their primary activity. Most wage work for women (and men) involves casual day labor and there is tremendous variation in demand for agricultural labor across different regions. Hence if economic rationality influences parental choices, living in areas where there is greater availability of wage employment may result in postponement of marriage.

Wedding expenses and dowry may also influence economic considerations surrounding marriage timing. A number of studies have recorded sharp increase in dowry expectations with a dowry consisting of both cash and expensive household goods such as refrigerator or car. Increases in wedding expenses have also been noted by commentators (Bloch, Rao, and Desai 2004). Increased expenses associated with a daughter's marriage may lead to postponement of marriage as parents struggle to accumulate resources to provide appropriate dowry and pay for the wedding (Schlegel 1993; Caldwell, Reddy, and Caldwell 1983)

Empowerment of Women:

The economic arguments discussed above rely explicitly or implicitly on economic models of the household and assume an internally consistent and unified decision making structure within the household with little attention to the household as a site for construction of gender inequalities (Folbre 2001; Dwyer and Bruce 1988). In contrast, feminist scholarship on empowerment pays close attention to intra-household inequalities.

Whatever the imperatives driving the household as a whole, entry into a married state is viewed by most brides –particularly very young brides – with considerable trepidation. More than 90% of the new couples in India begin their married life living with the groom's parents. An incoming daughter-in-law is expected to conform to the lifestyle of a new family. Consequently, while most girls expect to get married at an appropriate time, few girls are eager to be teenage brides. We document below that in India, marriage decisions remain within the purview of the family. However, this should not be taken to mean that women have no say in a decision that intimately affects their lives. In the India Human Development Survey (described below), nearly 62% of women felt that they had some say in choosing their husbands. Mothers and older sisters-in-law are often asked to ascertain the wishes of the young women. While this is far from having full-fledged agency, we expect that in areas where women have a greater role in making decisions about different aspects of their lives, women's input in their own marriages may be more welcomed than in areas where women's autonomy is more limited. Since few girls choose to marry at a very young age, it seems reasonable to expect that women's empowerment is negatively associated with age at marriage. Age at marriage may also be related to women's autonomy through another channel. As younger brides are more likely to be docile, in areas where parents-in-law seek to limit women's power in the household, they may have a preference for younger brides.

Women's autonomy can be measured in a variety of ways (Narayan 2006) but their access to and control over resources is a fundamental aspect of autonomy, reflected in minor things such as having cash on hand for household expenditure as well as major things such as having their name on a housing title or rental papers. A number of studies have also suggested

that the ability to make decisions regarding a variety of household choices is an important part of women's empowerment (Bloom, Wypij, and das Gupta 2001; Kishor 2000; Morgan et al. 2002; Jejeebhoy and Sathar 2001). This includes such decisions as purchasing expensive goods, children's health care and marriage decisions.

Gender Scripts:

The gender empowerment literature directs our attention to the intra household divisions and exercise of gendered power and is used successfully in many research domains (Presser and Sen 2000; Malhotra, Schuler, and Boender 2002). However, it has limited utility for understanding the symbolic dimensions of gender. Here the concept of gender scripts has something to offer. Since our application of gender scripts to familial behavior is novel, we elaborate on it below.

Performance theory -- a subset of the new semiotic school of the sociology of culture -- allows us to focus on the way in which social actors use culture to fabricate meaning in and of their own lives (Kaufman 2004). Research on gender performance argues that gender is a powerful ideological device which shapes choices and limits actions in a way that produces gendered behaviors in day-to-day interactions (West and Zimmerman 1987). Extending it to the topic at hand we argue that marriage is part and parcel of a repertoire of actions through which families create visible displays of gender while ensuring their participation in the dominant cultural scripts in their community.

The notion of scripts that frame actors' day-to-day behavior and yet are constantly modified as actors face competing demands provides an interesting framework for a study of

marriage in India. Travels across India document wide diversity in the way gender is performed. Purdah or ghunghat is probably the most visible marker or public performance of gender and it varies from saris rendering women virtually invisible to prying eyes in north-central India, to a polite nod at segregation when a sari is hastily pulled over the face in Gujarat, to a total absence of purdah in southern India. While ghunghat or purdah is the most visible marker to an outsider, there are many other more subtle markers of gender segregation. In some parts of India, it is common for men and women to eat together, in others segregation within the family would make it unthinkable for a young daughter-in-law to eat with her father-in-law. Restrictions on women's physical mobility is yet another marker of gender segregation where women must seek permission from family elders before venturing outside the home to visit health centers, friends' homes or the local bazaar and often must be accompanied. Steve Derne in his qualitative work in Banaras (Varanasi) in north India (Derne 1994), notes that "in every interaction in which a husband gives his wife permission to go outside the home, he reconstitutes the normal state of affairs in which restrictions on women are necessary" (p. 210).

It is important to note that gender segregation is not necessarily a marker of gender inequality in the household. Secluded women may retain substantial power in the household and women with considerable freedom of movement may not find this freedom translating into control over economic resources. This observation is consistent with a host of demographic studies of gender which have remarked upon the multidimensionality of gender inequality (Mason 1986; Kishor 2000). For our work, the value placed on performance – as measured through gender segregation – is particularly important.

Gender Scripts in India:

Unlike economic rationality and empowerment theories, an emphasis on gender scripts is inherently tied to the meanings individual actors place on their actions and remains culturally specific. In Indian context, gender scripts reflect both culture-in-action and status-in-action. In Indian literature two different lines of research have focused on symbolic representation of gender and gender performance. Noted Indian social anthropologist M. A. Srinivas first identified the role of women as custodians of family status and caste purity (Srinivas 1977). Castes attain higher status by higher adherence to the classical "Sanskrit" way of life by prohibiting widow remarriage and ensuring that women are immured from the external world and its pollution. But while focusing on the notion of "sanskritization," the process through which castes manipulated their ritual status by embracing gendered practices such as prohibition of widow remarriage, he also acknowledged that this might conflict with other forces such as modernization and Westernization. Srinivas's work has been highly influential for several generations of scholars working within this framework including the research on gender and caste (Dube 1996, 2001) and status production through female seclusion (Papanek 1973).

The other stream of literature in India which examines symbolic aspects of gender and its use in the nationalist discourse stems from the work of Partha Chatterjee who has written persuasively about the construction of modern Indian womanhood in the context of the Indian nationalist movement where projecting Indian womanhood as decorous, pious and modest set the stage for demonstrating the superiority of Indian culture against the British colonial state (Chatterjee 1989). In the late 19th and early 20th century, defining the age of consent or legal minimum age at marriage became the principle site in which colonial ideology collided with the

nationalist movement and its alternative construction of ideal Indian womanhood. Age of

Consent Act of 1891 set a minimum age for a "consenting" bride to be 12. Nationalist Indians

saw this as an attack on Indian religious autonomy and a vigorous protest emerged, led by a

charismatic Indian politician, Balgangadhar Tilak (Heimsath 1962). A subsequent increase of

minimum age at marriage to 14 in 1929 in an act that came to be known as the Sharda Act also

led to significant protests. In this context, the positioning of Indian women of refinement against

their Western counterparts emerged as a response to the colonial state and Western discourse

which continually saw Indian women as dispossessed and subjugated (Chatterjee 1989).

While the resistance to the colonial construction of early marriage may be less relevant

after sixty years of independence, other practical concerns persist. One of the greatest concerns

for most parents is to arrange a marriage for their daughter in a "good" family where she would

thrive. Although the definition of a "good marriage" may vary across families, there is a

universal concern that nothing should damage the value of a daughter in the marriage market. It

is difficult to find data on premarital sex but studies indicate that less than 5% of women

acknowledge having sex before marriage and often this includes premarital sex with men they

subsequently marry (Santhya and Jejeebhoy 2007). Popular literature, films and social science

literature all emphasize a fear of women's sexuality, particularly among upper class and upper

caste families, and argue that even a possibility that the bride may not be a virgin reduces her

desirability to her prospective parents-in-law. In practice, a girl does not even have to be sexually

active to be labeled promiscuous. Simple contact and platonic friendships with the opposite sex

can be enough to damage her reputation (Lindenbaum 1981; Caldwell et al. 1998; Caldwell,

Reddy, and Caldwell 1983). An article on modernity in middle class India, notes a persistent

male preference for modesty and femininity even in spite of the onslaught of the global culture in cities (Derne 2003). Another study in Mumbai records young men's preferences for "homely," "simple" wives who "respect elders" (Abraham 2001).[1] This preoccupation with women's modesty often leads to early marriage, particularly for women. Based on fieldwork in Hyderabad, Leonard argues that while all Kayastha castes in her study had preferences regarding normative age at marriage, deviation from this normative age was permitted for men far more readily than for women (Leonard 1976).

However, this concern with women's sexual purity is neither universal nor predominant across class and geographic boundaries (Papanek 1973; Mendelbaum 1988). Reification of women's modesty is the privilege of upper social classes, and higher caste status is often demonstrated through such reification (Rao 2003; Liddle and Joshi 1989; Kapadia 1995). Lower class and lower caste women rarely have the privilege of secluding themselves. Similarly, casual contact with men is viewed with much greater fear in certain areas of the country than others. Political movements in some areas have served to mobilize women and erase some of the boundaries between the sexes (Kannabiran and Lalitha 1989). Tribal populations have been less influenced by the Hindu preoccupations with sexual purity (Bhasin 2007), and consequently areas with high concentration of tribal population have less restricted environment. Thus, a comparison of age at marriage across different parts of the country, which differ in the symbolism attached to different types of gender scripts, allows us to get a better handle on the extent to which early marriage is part of these scripts.

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[1] "Homely" is translated from the Hindi word, *ghareloo*, and should be understood to mean "family-oriented."

Research Questions and Operationalization:

We have focused on three different dimensions of gender – economic rationality, women's empowerment and gender scripts – in our discussion above. Following in the footsteps of much of the recent conceptualization of gender as a multidimensional concept (Mason 1995; Mukhopadhyay and Higgins 1988; Agarwala and Lynch 2006), this paper attempts to understand which of these various dimensions may be related to shaping age at marriage in India. In order to disentangle which of these three dimensions of gender are relevant to marriage timing in India and their relative contribution we ask the following questions:

1. Do economic considerations such as higher wedding expenses or higher female wage labor lead to delayed age at marriage?

2. Is female empowerment in a community associated with delayed marriage?

3. Are markers of gender scripts emphasizing greater male-female segregation associated with delayed marriage?

4. If more than one dimension is relevant, which one is more salient in research on age at marriage in India?

The crux of our research strategy relies on the fact that there is substantial variation in both marriage timing and different dimensions of gender across India. India is rich in diversity and particularly rich with respect to marriage and kinship patterns, gender roles and ideologies and economic structures across states (Singh, Adams, and Trost 2004; Basu 1993; Jejeebhoy and Sathar 2001). Even within a single state, there can be large differences across different regions, for example South Kanara in southern Karnataka is a matrilineal society with more egalitarian gender relations while northern Karnataka follows far more restrictive gender norms. Hence a

13

focus on regional diversity in age at marriage allows us to disentangle the relationship between different dimensions of gender and age at marriage.

We operationalize different dimensions of gender by measuring them at a regional or district level. In keeping with our earlier discussion of factors which motivate parental decisions regarding their daughters' marriage, we argue that regional context plays an important role in these decisions. Individuals who live in areas characterized by high dowry are affected by different constraints than those living in areas where dowry is less prevalent. Similarly, the symbolic dimension of gender is shaped by the cultural traditions of the region in which an individual lives. For example, the way in which purdah is viewed and what it is meant to demonstrate differs by whether a hijab is donned by a woman in Egypt or in France.

Districts in India reflect administrative boundaries as well as historical realities in which various princely states differed from each other in the cultural and linguistic composition of inhabitants, and a large number of studies of Indian society take districts as an important unit of analysis (Murthi, Guio, and Dreze 1995; Malhotra, Vanneman, and Kishor 1995; Kishor 1993). Data from individuals are aggregated at the district level – separately for urban and rural residents – to provide us with different markers of gender to which families respond as they arrange marriages.[2]

Our research provides an interesting opportunity to make a contribution in this area. We are fortunate to have access to the newly collected India Human Development Survey 2005, spanning 41,554 households over all 25 states and union territories of India (with the exception

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[2] We omitted 57 observations from this analysis because they came from district segments where very few women were interviewed and hence district level indicators of gender were based on small samples.

of Andaman and Nicobar). The survey includes a household module as well as a module administered to 33,510 ever-married women aged 15-49. For this analysis the contextual indicators of gender are aggregated at the district level (separately for urban and rural areas) for all of the 33,510 women surveyed. These measures are then regressed on age at marriage of the individual women using a hierarchical linear model. Due to selectivity involved in including only ever-married women in our analysis, we have restricted our analysis of age at marriage to 27,365 women aged 25 and above. As indicated by the Indian census of 2001, by age 25, over 95% of the women have been married.

Economic factors:

We have suggested that parents may be more inclined to postpone marriage if girls are able to find wage work. In contrast, high dowry expectation or high levels of wedding expenditure might delay the marriage. Thus we operationalize the economic dimension of gender as:

- Proportion of women aged 15-49, regardless of their marital status, who are engaged in work for pay.[3]

- Proportion of women in the district who indicate that it is common to give one of the large consumer items – car, refrigerator, color television or scooter – as a dowry or gift at a daughter's wedding their community.

- Log of average expected wedding expenditure at a girl's wedding.

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[3] It has been argued that wage work provides women with far greater autonomy than working on family farms and in family businesses (Blumberg 1991; Dwyer and Bruce 1988).

Economic and Familial Empowerment:

Women living in areas with a greater level of empowerment -- as indicated by women's ability to make decisions -- are hypothesized to have a higher age at marriage. The markers of empowerment included in this analysis are:

- Proportion of women in the district who have their names on the rental or ownership papers of their home.

- Proportion of women in the district who had cash at hand for household expenses at the time of the interview.

- Mean score on a decision making index which counts the number of decisions for which the respondent participates in decision making – calculated as a district level average. The decisions included are: who decides what to cook, who decides whether to buy an expensive consumer durable item, who decides how many children the respondent and her husband should have, who decides when to take a sick child to the doctor, who decides on marriage arrangements for the children.[4]

Gender Scripts:

We have argued that ideological dimensions of gender shape behaviors by providing families with scripts regarding appropriate behaviors for male and female members and marriage decisions are part and parcel of these scripts. We note that our notion of gender scripts in which a variety of markers of gender performance covary does not provide a strict causal explanation. Thus, we do not claim that at a community level, markers of women's seclusion *cause* early age

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[4] Because women's participation in cooking decisions is somewhat normative, these analyses were conducted with and without cooking as one of the index items. Results did not change substantially.

at marriage. Rather we argue that each is a different manifestation of a gender script. However, in our empirical analysis, we use age at first marriage as a dependent variable and district level markers of gender scripts as independent variables under the assumption that while individual behavior is undertaken in the context of a community climate, its contribution to the overall gender climate is so minuscule that it can be ignored in a regression model. In order to test this hypothesis, we measure district level manifestations of the strength of gender scripts using the following indicators:

- Proportion of women who engage in some form of ghunghat or purdah[5].

- Proportion of women who do not live in families where men and women take their main meal together. While ghunghat or purdah generally reflects seclusion from men outside the family, separate meals mark separation within the family.

- Mean score on an index counting the number of places for which the respondent does not go alone but needs (or prefers) to be accompanied. The places of interest are: visiting friends and relatives, visiting a bazaar or grocery store, and visiting a health clinic. The score on this index is averaged across all interviewed women in the district.[6]

Rationale for Selection of Indicators:

Our choice of indicators for different dimensions of gender is based on observations in the literature and face validity. For example, a substantial body of literature points to the

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[5] Ghunghat is a Hindu term and purdah a Muslim term; both refer to covering head and/or face in order to seclude women from contact with men outside – and sometimes inside – the family. While the exact form of ghunghat or purdah varies across region, caste and class, practice of ghunghat/purdah is a meaningful construct to women respondents who clearly understood this question and could respond to it easily.
[6] In some instances, women responded that they never go to a grocery store or visit friends. In these instances, they are coded as not going alone.

importance of gender segregation as indicated by veiling and the need for women to be accompanied in public. One of the most striking accounts comes from Gloria Goodwin Raheja, an American anthropologist who lived in Himachal Pradesh during her fieldwork:

"Though of course I could become a daughter of the village in only limited ways … sometimes I did feel that I had internalized some of the expectations about women's behavior in Pahansu. While daughters never veil their faces in their natal village, they do keep their heads covered with their shawls; to go about with uncovered head or loosely flowing hair would be an open admission that one was *besaram*, without modesty. I soon began to feel incompletely clothed if my head wasn't covered, and I often felt uncomfortable in company of men who weren't known to me. And my own discomfort brought an understanding that just as I covered my head and avoided unwanted male gaze out of a sense of expediency and privacy, so too might other women in Pahansu veil not because they believed themselves to be inferior to men but because such a pose of deference and modesty is required if honor of one's household is to be upheld …..
(Raheja and Gold, 1994, Pp. xx-xxi)

"[on attending a performance where women rarely go] … Gujjar women never attend these dramas, but I insisted I should witness the event. It was with pained expression that Telu and several men of the family walked with me to the spot in the field where the stage was and sat with me through the first day's performance. And I too felt uncomfortable …. I didn't go to the play the next day, thinking that the small increment of ethnographic knowledge that I would acquire was not an adequate compensation for those pained expressions and my own unease." (Raheja and Gold, 1996, P. xxi)

Similarly, women's access to and control over resources and household decisions is identified as an important marker of women's empowerment (Kishor 2005; Narayan 2006). However, we also recognize that the research on measuring different dimensions of gender is in its infancy with relatively little consensus on which measures should or should not be used to operationalize different concepts (Basu and Koolwal 2005). Consequently we strike a balance by selecting a number of different concepts to capture certain constructs based on face validity, explore their correlation with each other, but do not combine them to form a scale since these combinations impose as yet unexplored assumptions about data and functional forms underlying the data reduction strategies (Bollen 1989).

Appendix Table 1 presents correlation matrix for various indicators used in this paper, and Appendix Table 2 contains the results of a Principal Component Analysis. The results indicate that our indicators for economic rationality as well as gender scripts hang together very well. They are strongly correlated with each other and weakly correlated with variables we argue represent other dimensions of gender. The results from the Principal Component Analysis suggest that our choice of indicators based on prior literature seems fairly reasonable in that each of these variables has a higher factor loading on scales where other variables reflecting the same construct load with lower loading on other scales. The Principal Component Analysis with these 9 items indicated three factors with eigenvalue of 1 or above. The results and the factor loadings are shown in Appendix Table 2.

Statistical Model:

In order to test the relationship between different dimensions of gender at a community level and age at marriage we estimate the following model:

$$Yij = \Pi0j + \Pi1j * X1ij....\Pi nj * Xnij + \varepsilon ij$$
$$\Pi0j = \beta0 + \beta1j * Y1j...\beta mj * Ymj + \phi j$$

Where :

Yij = Age at marriage for woman i in district j

$\Pi0j$ = Intercept for district j

$X1ij - Xnij$ = 1 to n characteristics of woman i in district j that influence her age at marriage

$\Pi1j - \Pi nj$ = Corresponding level 1 coefficients that indicate the effect of characteristics X1 - Xn on age at marriage

εij = Level 1 random effect

$\beta0$ = Intercept in the level 2 equation

$Y1j - Ymj$ = 1 to m district level gender indicators

$\beta1j..\beta mj$ = Corresponding level 2 coeffecients that indicate the effect of gender indicators Y1 - Ym on age at marriage

ϕj = District level random effect

This two level hierarchical model is estimated using the statistical program HLM with 27,365 women at level 1 and 495 rural and urban district populations at level 2. Note that while the sample was selected in a stratified design with states and districts forming primary axis of stratification, the analysis is based on an unweighted sample since the stratification design is incorporated into our analytical design due to the use of hierarchical linear models.

Data:

As mentioned earlier, this paper relies on data from the India Human Development Survey, 2005. This was an all India survey of 41,554 households for which a variety of socioeconomic information was collected. It encompasses all 33 Indian states and union territories (with the exception of small island populations of Andaman, Nicobar and Lakshadweep) and spans 1,503 villages and 971 urban blocks. Of the 602 Indian districts in 2001, 383 are included in the sample. A stratified sampling procedure was used to select districts representing a range of socioeconomic conditions and was followed by cluster sampling of villages and households within villages to generate a nationally representative sample of households. The survey was specifically designed to study various dimensions of gender relations and since the data are collected in structured interviews, considerable attention was directed to framing questions which would provide information that would meaningfully tap into various dimensions of gender roles and gendered opportunity structures within the Indian context.

For this analysis, we restricted our sample to 27,365 ever married women age 25-49 for whom complete data were available. Results from the 2001 Indian census indicate that nearly 95% of women are married by age 25 and hence, restricting our sample to ever married women aged 25 and above allows us to minimize the selection bias. These women were interviewed in their homes by female interviewers in a local language. Descriptive statistics for the variables included in this analysis are presented in Appendix 1. In cases where age at marriage was

missing or inconsistent, it has been imputed using the procedure widely used in Demographic

and Health Surveys conducted by Macro International (Croft 2008).[7]

Note that in order to differentiate between gender systems in urban and rural areas, in each

district urban and rural samples are treated separately in calculating various community level

variables. Our sample from 383 districts gives us 495 relevant communities.[8]

Marriage and the Corporate Family in India:

The study of marriage timing in India offers at once a phenomenon that is extremely

simple and universal in some dimensions and dazzling in its complexity in others. Marriage has

historically been and remains universal (Das and Dey 1998), and while age at marriage has been

rising slowly, largely through declines in child marriages, mean age at marriage remains below

20 (see Table 1). Census data from 2001 show that less than 2% of men and one% of women

remain unmarried. Moreover, 95% of women are married by age 25 and men by age 32. As

indicated by Table 2, even in comparison with other developing countries, age at marriage in

India is one of the lowest. With a decline in child marriage, age at marriage is likely to have

become more compressed, and indeed most women marry between the ages of 14 and 25 with a

particularly tight clustering between ages 17 and 19, showing far less dispersion than observed in

other societies.

At the same time, the phenomenon of marriage timing offers an interesting peek into the

functioning of a society buffeted by forces of change, both economic and cultural. Although it is

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[7] A prior version of the paper based on original data without date imputation reached similar conclusions.
[8] We have separated 383 districts into 495 district aggregates with 117 districts contributing to both urban and rural samples and the remaining contributing to either an urban or rural sample.

widely accepted in the literature that arranged marriages are widespread, this paper is the first to provide empirical documentation of it pervasiveness. As Table 3 indicates, while marriage decisions remain within the purview of the family and less than 5% of the IHDS respondents had a primary role in choosing their husbands, nearly 65% of the respondents felt that they were consulted in this decision. It is interesting to relate this to the length of the acquaintance between the spouses; about 66% of the women met their husbands on or around the day of the wedding and 78% knew their husbands for one month or less when they got married. Even among women who felt that they had a choice in partner selection, about 55% met their husbands at or around the wedding. We present these figures to suggest the complexity of the arranged marriage system in India. While marriage remains one of the most important decisions faced by the extended family, brides — and grooms — are frequently consulted in some form although they rarely have an opportunity to develop a familiarity with their partners which comes from a longer acquaintance. A Hindi phrase "*chat mangni, pat byah*" – quick engagement and even quicker marriage – reflects the fear of premarital sexual intimacy between engaged couples and while parents seek their children's consent in marriage, little premarital contact is allowed between the couple. The results presented in Table 3 seem to support this contention.

However, there is substantial diversity in age at formal marriage across different regions of India. Table 4 indicates mean age at marriage in our sample across different Indian states. Interestingly, these differences are not always commensurate with the economic status of these states nor do they neatly fit into the north-south divide observed in other demographic phenomena in India. The northern state of Punjab has higher age at marriage than the southern state of Andhra Pradesh and one communist state Kerala has a median age at marriage of 20

while the other communist state West Bengal has a median age of 17.[9] This variation in age at

marriage provides us with an opportunity to theorize about factors which lead to early marriage

in some parts of India compared to others.

Gender and Marriage Timing:

Results from hierarchical linear models, estimated with HLM are presented in Table 5.

The baseline model (not reported here) contains no covariates and simply allows us to partition

the variance in age at marriage between districts and individuals in a district. Results show that

about 70% of the variance is between individuals and 30% is between districts.

Model 1 adds individual level factors, as well as state level dummy variables, to the

analysis in order to provide a basic description of differences in age at marriage by social and

economic background variables. Results suggest large differences in age at marriage by

education with women with higher secondary and college education marrying 4.9 years later than

uneducated women. While the causal direction of this relationship is far from clear (getting

higher education could delay marriage or delayed marriage may result in greater opportunity to

complete education), this is a large difference. Other important factors at the individual level are

belonging to Scheduled Caste, Scheduled Tribe, or being Muslim. Woman's age – a marker of

cohort – is not associated with age at marriage, corroborating results from other studies that

suggest that marriage regimes are slow to change (Fussell and Palloni 2004). Age at

menstruation is strongly associated with delayed marriage suggesting that many parents wait

until daughters have attained puberty before arranging marriage.

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[9] Interestingly, these variations in marriage timing transcend national boundaries. Marriage age in Pakistani Punjab is similar to Indian Punjab while that in Bangladesh is closer to West Bengal.

In Model 2, we add economic indicators at the district level: Proportion of women in wage employment, proportion of families claiming a high prevalence of dowry as indicated by giving one of the large consumer durables (car, scooter, refrigerator or TV), log of the average wedding expenditure for a girl. Our theoretical expectations, in keeping with some of the US literature (Oppenheimer 1988), suggested that prevalence of wage labor would be associated with delayed marriage as will be higher wedding expenditures and dowry. The results do not support this expectation. The coefficients for dowry and wedding expenditures are neither large nor statistically significant. The relationship between wage labor and age at marriage is significant but in the opposite direction, i.e. higher prevalence of wage labor seems to lead to *earlier* rather than later marriage. This suggests a need to rethink what wage employment means in a society like India, a theme to which we return in our discussion section.

In Model 3, instead of economic factors, we include markers of gender empowerment discussed earlier: women's access to cash, women's control over various household decisions and women's names on home rental papers or titles. Access to cash and names on home titles are not associated with age at marriage, although women's participation in household decision making is associated with delayed age at marriage. This suggests that areas where women have greater power within the household, age at marriage is somewhat higher, although this coefficient is not very large. It is important to note that while we have clubbed the three markers of economic and familial empowerment together and results from principal component analysis presented in Appendix Table 4 suggest they are highly correlated, these are substantively distinct indicators. Women's name on housing title reflects both lending practices in an area as well familial economic strategy. For example, in areas dominated by petty entrepreneurs, such as the

western state of Gujarat, it is often common to place the home in women's name to prevent foreclosure in the event of business reversals and bankruptcy. Hence, it may not reflect true empowerment in interpersonal situations. In contrast, participation in decision making may be more reflective of women's role in day to day household decisions and may be more relevant to marriage decisions. Nonetheless, while the coefficient for this variable is statistically significant, inclusion of empowerment related markers only reduces the unexplained variance at level 2 by about 4%.

In Model 4 we focus on indicators of gender performance – the proportion of women practicing *ghunghat* or *purdah*, the proportion of families in which men and women do not eat together, and the average score on an immobility index indicating the number of places which women cannot visit unless accompanied. Here the results are in the hypothesized direction and all three variables are statistically significant. A lower score on gender performance is associated with a higher age at marriage. The effect of the addition of these factors on the coefficient for urban residence is also noteworthy. It appears that a large part of the urban-rural difference in age at marriage is due to a lower emphasis on gender performance in urban areas.

Model 5 includes all three dimensions of gender in order to examine potentially confounding effects. The indicators of gender script remain statistically significant with coefficients getting marginally larger. For other dimensions, two variables that were close to statistical significance become significant; average wedding expenditure and having cash at hand. As hypothesized, areas where average wedding expenditure is large have slightly later age at marriage. However, empowerment as reflected in having cash at hand, seems to be associated with earlier, rather than later, age at marriage.

26

Analysis of explained variance allows us to examine the relative importance of these three sets of factors. Economic factors and empowerment indicators reduce unexplained variance at level 2 by about 4% each while the inclusion of gender script variables reduces the unexplained variance by 8%. All three factors together reduce the unexplained variance by 17%. It is important to note that all models presented in Table 5 include controls for state of residence, hence the reduction is level 2 variance understates the substantive impact of the gender variables. In order to better understand the role of these factors, it is important to look at the changes in state coefficient after the addition of each set of gender variables.

Regional differences in income, education and culture dominate the Indian panorama; age at marriage is no exception. Studies documenting these interstate differentials often note that these differences are so robust that the addition of individual-level socioeconomic controls do little to dampen the differences between states (The World Bank 2004). Thus, a comparison of state coefficients across different models in Appendix Table 4 presents an interesting test. We find a decline of about two thirds in the size of the state coefficients between Models 1 and 4. This suggests a substantial portion of inter-state differences in age at marriage can be attributed to our markers of gender performance. Some of the specific changes are particularly interesting. Punjab has one of the highest ages at marriage in the country at almost 20 years old, and less than 10% of women get married before reaching age 16. In contrast, the neighboring state of Haryana has an average age of marriage which is two years lower, and about 23% of women get married by age 16. These states have similar educational and economic profiles, not surprising since Haryana was carved out of Punjab. However, they differ in cultural traditions. Punjab contains a large number of Sikhs and even Hindus are influenced by Sikh culture. Haryana

shares cultural traditions with the central plains so the two states differ substantially in the way gender is articulated. Purdah is the most visible difference with only 30% of the Punjabi women practicing purdah while 80% of the Haryana women engage in this practice. Once we control for markers of gender performance, age at marriage difference between Haryana and Punjab drops from 1.7 to 1.1 years. The state coefficients in Appendix Table 4 are largely unchanged between Models 1, 2 and 3, but the addition of variables reflecting gender scripts makes a tremendous difference. For example, compared to Uttar Pradesh, the omitted state, the three Southern states – Kerala, Tamilnadu and Karnataka – have an age at first marriage that is higher by about 2 years. This difference remains largely unaffected by the addition of economic or empowerment variables but the addition of markers of gender performance reduces the difference to about 0.75 years.[10]

We have examined the importance of three aspects of gender relations – economic factors, economic and familial empowerment and gender performance -- in India with respect to differences in age at marriage. The results show that contrary to the expectation, women's wage labor reduces rather than increasing age at marriage. At least one marker of familial empower is related to age at marriage in expected direction but this effect is relatively small. However, the three indicators of gender performance are consistently related to age at marriage in a direction

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[10] This paper has focused on contextual effects of gender. It is important to note that some of these relationships may be at an individual level rather than at a contextual level, i.e. women may be likely to marry early because they have been raised in a family which values gender segregation, rather than a community which expects gender segregation. Since we have little information on premarital household of the IHDS respondents, we cannot sort out these effects. However, multilevel regressions which control for current individual circumstances such as wage employment, purdah practice, whether males and female eat together and women's own role in household decision making, continue to show statistically significant contextual effects, albeit these effects are slightly attenuated. This is consistent with findings in other studies which contain both individual and contextual gender variables (Desai and Johnson 2005).

we hypothesized. Areas where male-female segregation is less intense and where gender performance received lower emphasis are also areas where marriage tends to be delayed.

This does not mean that gender performance *causes* early marriage; rather marriage is part and parcel of the gender scripts propagated in families. In this context, the negative coefficient on wage employment provides an interesting challenge. Economic arguments suggest that where daughters have a higher likelihood of engaging in wage labor parents may be more motivated to delay marriage and women themselves may have other options available to them besides marriage. However, greater participation in the labor market also brings with it risks that challenge gender scripts. Girls may be more likely to come in contact with men outside their families resulting in a potential love affair. Since families may perceive greater threat to their control over their daughters' sexuality with increased labor force participation, many may prefer to avoid any potential pitfalls by arranging early marriages.

It is particularly noteworthy that a substantial proportion of the difference between ages at marriage in different parts of India is associated with our markers of gender performance. Once these are included in the model, the coefficients for state of residence decline in size. While the state coefficients continue to reflect differences across India in education, economic status and a host of other markers of well being, leaving the residual effect large and often statistically significant, the decline in the size of these coefficients between Models 1 and 4 also suggest that a substantial proportion of inter-state difference in age at marriage is attributable to regional differences in symbolic aspects of gender.

Discussion:

Although marriage is recognized as a core phenomenon of demographic interest, research on marriage in developing countries has often been limited. In an introduction to a special issue on families in international perspective for the Journal of Marriage and the Family, Bert Adams notes: "…. yet publications on families do not equally represent the various parts of the world. Although it is hardly surprising that scholarship is dominated by knowledge of Western industrial societies, it would be well to explain the regional limitations on information about the world's families " (Adams 2004). We argue that part of the reason why research on marriage in many non Western societies is limited is due to individual centric modes of explanation. Most theories are developed to explain why individuals may choose to marry late or stay single. However, in situations where families play an important role, researchers are often forced to acknowledge limitations of modernization perspectives focusing on individual decisions but are left without alternative explanations (Hirschman 1985; Malhotra and Tsui 1996). We argue that a focus on corporate families provides an alternative framework.

A focus on families also opens up new avenues for understanding how families are implicated in creation and recreation of hierarchical gender relations of which marriage is an intricate part. Past research on gender and marriage has tended to focus either on gender division of labor or on institutional structures surrounding education and employment. These explanations are consistent with a model in which individuals make decisions regarding their own marriage. Once we begin to focus on the role of families in making marriage decisions for their children, these explanations are only of limited utility. In trying to find an alternative explanation, we build on early insights from symbolic interactionist literature (Goffman 1976; West and

Zimmerman 1987) to argue that early marriage is a part and parcel of a script in which gender is performed by women through symbolic display of segregation, modesty and chastity and early marriage is part and parcel of culture-in-action. Arguably one of the most important contributions of our work lies in identifying potential synergies between the new sociology of culture and demographic research. Ann Swidler articulates this most clearly when she argues (Swidler 1986), "Culture influences action not by providing the ultimate values towards which action is oriented, but by shaping a repertoire or 'tool kit' of habits, skills and styles from which people construct 'strategies of action'."

Our theoretical arguments and empirical results suggest that gender scripts which emphasize segregation between men and women and value "decorous" and "modest" behavior on women's part are also associated with early marriage. However, this argument leaves two important theoretical questions unanswered: (1) Table 4 documents considerable diversity in gender scripts across different parts of India. How and why did these differences arise? (2) Are these scripts immutable or does the onslaught of globalization dilute their importance? Given the cross-sectional nature of our analysis, we cannot provide empirical evidence to address these questions; however, our reading of the literature provides tantalizing clues which deserve future research.

Since "doing gender" approach in U.S. literature has relied mainly on theoretical insights from symbolic interactionism, it tends to ignore the power dynamics and role of social structure in shaping day to day interactions (Collins et al. 1995). However, this issue has been addressed explicitly in Indian literature which argues that gender displays are woven into a hierarchical society so that these displays not only reflect an ideal of Indian womanhood, they reflect an

ideal of *upper class* and *upper caste* womanhood (Srinivas 1977; Dube 2001). The repertoire with which Indian families address marriage decisions and behaviors is rooted in a historical legacy in which upper class/caste Indian women was represented as "decorous, pious and modest" and a history of social stratification in which castes competed with each other in attaining higher status through control over women's sexuality (Chatterjee 1989; Dube 1996; Srinivas 1977). It is interesting that gender scripts are far less stringent in Tamil Nadu, Kerala and Maharashtra, states characterized by strong anti-caste movements (Omvedt 2006) and Punjab, dominated by Sikh religion which emerged in reaction to the rituals and inequalities of Hinduism. This suggests that future research on gender scripts in India would be well served to link them to historical forces shaping social stratification based on caste, class and religion.

The second question deserving of future research centers on immutability of gender scripts. Increasingly it appears that Indian families are torn in two directions, status attainment through gender performance and status attainment through the performance of modernity. Demands of a global culture and valorization of modernity motivate parents to educate their daughters, regardless of employment considerations, and as our results suggest, enrollment in secondary schools and college is associated with substantial delays in marriage. The delaying effect of modernity is further strengthened by the changing political culture. While the political culture in colonial India constructed marriage legislation as the illegitimate demands of a colonial state, the political culture in an independent India is far more open to civil reforms. Increasingly, early marriage is being constructed as part of a traditional ideology that a modern society must transcend. Should the demands of modernity triumph over gender performance, we

may well see rising age at marriage even as families retain the power of conducting marriage negotiations.

Some caution in warranted in assuming that status attainment through "doing modernity" (Schein 1999) is bound to triumph in a globalizing India and other parts of South Asia. A study of global culture in Nepal notes pointedly that the global "youth" culture in Kathmandu is not only class specific but also gender specific with males participating in a public culture while much of women's consumption of global culture – such as cinema or TV shows – taking place in private domestic settings (Liechty 2003). Steve Derne, (Derne 2003) in an article titled "Arnold Schwarzenegger, Ally Mcbeal and Arranged Marriages: Globalization on the ground in India" notes that "After a decade of frenzied globalization, the rich of India welcome consumer goods and experiment with new arrangements between men and women. But because the economic opportunities of middle-class Indian men have not expanded, most of them merely welcome Western media images that reinforce their power and masculine self-image." Although a variety of American television shows and films continue to inundate modern India, Indian middle class men continue to privilege images of Arnold Schwarzenegger and Jackie Chan in order to bolster their masculine self image while seeking "homely" and "modest" wives who will conform to the demands of the Indian extended family. Continuing importance of arranged marriage (Ravinder Kaur 2004) and dowry (Srinivasan and Lee 2004) in modern India bolsters the argument that globalization may have a long way to go before gender scripts woven into the Indian stratification system begin to unravel.

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Table 1: Singulate Mean Age at Marriage of Females in India, 1961-1999

Census year	**Singulate Mean Age at Marriage for Females**		
	Rural	Urban	Total
1961	15.7	17.9	16.1
1971	16.7	19.2	17.2
1981	17.8	20.1	18.4
1991	18.7	20.7	19.3
1998-99 NFHS-2	19	21.5	19.7

Table 2: Comparison of Marriage Timing with Other Developing Countries

Region	Percent Married Female	
	Age 20-24	Age 25-29
Eastern/Southern Africa	65.60	83.40
Western/Middle Africa	78.80	92.30
Eastern Asia	45.90	91.60
Former Soivet Asia	54.00	80.70
Caribbean/Central America	56.10	79.30
South America	51.30	76.00
Middle East/North Africa	54.60	81.40
Pakistan	61.40	85.20
Bangladesh	81.50	95.80
All India	**77.03**	**94.35**
Rural India	83.03	96.10
Urban India	63.23	90.27

Source: Mensch, Singh, Casterline. 2005. "Trends in the Timing of First Marriage
among Men and Women in the Developing World."
The Population Council Working Paper No. 202.
for other developing countries exception Pakistan and Bangladesh
Pakistan, Website of the Population Association of Pakistan
Bangladesh, Results from Bangladesh Demographic and Health Surveys, 1999/2000
Census of India, 2001, Table C-2 for India

Table 3. Prevalence of Arranged Marriage

	Proportion of women who chose their husband by themselves	Proportion having a say in choosing their husband	Proportion meeting husband at least 1 month before marriage
All India	0.05	0.62	0.23
Place of Rsidence			
Rural	0.05	0.56	0.21
Urban	0.05	0.74	0.27
Woman's Education			
No Education	0.04	0.50	0.20
1-5 years	0.05	0.62	0.24
6-9 years	0.05	0.72	0.26
10-12 years	0.07	0.82	0.26
Any college	0.08	0.89	0.29
Current Age			
25-30	0.06	0.63	0.23
31-35	0.05	0.63	0.22
36-40	0.04	0.60	0.23
41-44	0.05	0.61	0.22
45-49	0.04	0.57	0.23

Table 4: Distribution of Age at Marriage and Gender Indicators across Indian states

	Mean age at Marriage	Proportion getting married before age 16	Economic Factors			Gender Empowerment			Gender Enactment		
			Proportion of women in wage employment	Prop. families with high prevalence of dowry goods	Mean wedding expenditure	Proprtion with their name on home title/renal papers	Proportion with any cash in hand	Mean score on gender empowerme nt index	Mean score on immobility index	Proportion practicing purdah	Prop. of homes where men and wom. eat separately
All India	17.39	0.37	0.19	0.24	95956	0.17	0.85	4.19	0.90	0.53	0.49
Jammu & Kashmir	18.93	0.21	0.04	0.37	212743	0.11	0.72	3.57	0.69	0.77	0.30
Himachal Pradesh	18.57	0.20	0.05	0.74	117952	0.21	0.92	4.12	0.51	0.45	0.26
Uttarakhand	17.58	0.29	0.10	0.53	79696	0.37	0.92	4.71	0.70	0.42	0.44
Punjab	19.75	0.10	0.04	0.61	164166	0.06	0.88	4.57	0.76	0.33	0.38
Haryana	17.43	0.30	0.07	0.67	162802	0.10	0.96	4.77	0.65	0.80	0.61
Delhi	19.23	0.15	0.08	0.87	194475	0.26	0.97	4.86	0.44	0.43	0.39
Uttar Pradesh	16.11	0.52	0.08	0.48	101656	0.17	0.90	4.53	1.43	0.85	0.81
Bihar	15.17	0.67	0.13	0.21	81047	0.17	0.90	4.17	1.73	0.87	0.95
Jharkhand	17.42	0.34	0.13	0.27	89408	0.11	0.91	3.82	1.20	0.57	0.73
Rajasthan	15.86	0.54	0.11	0.36	118807	0.09	0.82	3.55	1.23	0.93	0.74
Chhattisgarh	15.98	0.53	0.43	0.10	49065	0.04	0.83	3.33	1.13	0.55	0.52
Madhya Pradesh	15.99	0.54	0.32	0.32	58924	0.17	0.76	3.90	1.28	0.92	0.55
Northeast	20.49	0.15	0.12	0.36	69335	0.21	0.78	4.54	0.30	0.27	0.26
Assam	19.46	0.12	0.04	0.05	36310	0.06	0.69	3.84	0.87	0.67	0.62
West Bengal	17.51	0.41	0.13	0.06	76417	0.10	0.64	4.43	0.85	0.67	0.34
Orissa	17.89	0.28	0.17	0.29	97117	0.04	0.80	3.87	0.81	0.67	0.89
Gujarat	18.17	0.20	0.22	0.07	95796	0.52	0.93	4.72	0.52	0.74	0.14
Maharashtra, Goa	18.05	0.29	0.24	0.10	77725	0.12	0.90	4.14	0.49	0.36	0.22
Andhra Pradesh	15.95	0.56	0.40	0.20	72505	0.15	0.97	3.61	0.65	0.12	0.55
Karnataka	17.69	0.33	0.28	0.05	107614	0.31	0.83	4.30	0.65	0.12	0.31
Kerala	20.87	0.07	0.10	0.05	188657	0.21	0.44	4.10	0.47	0.14	0.17
Tamil Nadu	18.92	0.18	0.26	0.08	102349	0.15	0.94	4.54	0.53	0.08	0.20

Table 5: Coefficients from Hierarichal Linear Models

	Hypothesized Effect	Model 1	Model 2	Model 3	Model 4	Model 5
Level 1 Coefficients						
Intercept		17.74 **	17.74 **	17.73 **	17.72 **	17.71 **
Age		0.00	0.00	0.00	0.00	0.00
Age at Menarche		0.37 **	0.37 **	0.37 **	0.37 **	0.37 **
Urban		0.43 **	0.17	0.44 **	0.18	-0.07
Caste/Religion (Upper caste Hindu Omitted)						
Other Backward Classes		-0.26 **	-0.25 **	-0.26 **	-0.25 **	-0.25 **
Dalit		-0.49 **	-0.48 **	-0.49 **	-0.48 **	-0.48 **
Adivasi		-0.21	-0.18	-0.20	-0.23 *	-0.18
Muslim		-0.34 **	-0.34 **	-0.33 **	-0.33 **	-0.33 **
Other religions		0.50 **	0.50 **	0.50 **	0.49 **	0.49 **
Consumption. Expend. Per Cap (adj)		-0.08	-0.09 *	-0.08	-0.08	-0.08 *
Education (none omitted)						
Education 1-5 Standard		0.43 **	0.43 **	0.43 **	0.43 **	0.42 **
Education 6-9 Standard		1.15 **	1.15 **	1.15 **	1.15 **	1.14 **
Education 10-12 standard		2.43 **	2.43 **	2.43 **	2.42 **	2.42 **
Some College/Degree		4.91 **	4.91 **	4.91 **	4.89 **	4.89 **
Level 2 Coefficients						
Economic Indicators						
Wage Employment	+		-1.77 **			-2.10 **
Cons. Durables in dowry	+		-0.27			-0.23
Log of wedding expenditure	+		0.32			0.33 *
Empowerment Indicators						
Cash on hand	+			-0.70		-1.16 **
Name on home title/rental papers	+			0.10		-0.06
Decision Making Index	+			0.26 **		0.17 **
Gender Performance Indicators						
Practice purdah/ghunghat	-				-0.96 **	-0.95 **
Men & women eat separately	-				-0.77 **	-0.81 **
Physical immobility index	-				-0.24 *	-0.31 **
Level 2 Variance		1.08	1.03	1.03	0.99	0.89
Level 1 Variance		7.72	7.72	7.72	7.72	7.72
% Reduction in Level 2 Variance (Over Model 1)			0.04	0.04	0.08	0.17

Models also include dummy variables for state, results for states in App Table 4

* p <= 0.05   ** p <= 0.01

Appendix Table 1: Correlation Matrix: Different Indicators of Gender at District Level

	Wage Employment	Dowry	Wedding Expend.	Physical Immobility	Purdah	Separate Eating	Access to Cash	Home title	Decion Making
Wage Employment	1								
Dowry	-0.3995	1							
Wedding Expenditure	-0.5304	0.5072	1						
Physical immobility index	0.0576	0.0326	-0.1167	1					
Prevalence of purdah	-0.141	0.2084	-0.0897	0.3974	1				
Separate eating pattern	-0.1108	0.2261	-0.0604	0.437	0.3757	1			
Access to cash	-0.0368	0.2161	0.0551	-0.2515	-0.01	-0.0241	1		
Name on Home title	-0.024	-0.0799	0.1008	-0.2534	-0.0448	-0.2024	0.1697	1	
Decision Making	-0.1588	0.0283	0.0948	-0.2438	-0.1363	-0.2201	0.2	0.2311	1

**Appendix Table 2: Factor Loadings
from Principal Component Analysis**

	Economic Factors	Gender Scripts	Empowerment
Wage Employment	-0.57	-0.03	0.00
Dowry	0.51	0.22	0.11
Wedding Expenditure	0.63	-0.15	-0.08
Physical immobility index	-0.08	0.47	-0.24
Prevalence of purdah	-0.02	0.59	0.18
Separate eating pattern	0.03	0.56	-0.01
Access to cash	-0.02	0.13	0.67
Name on Home title	-0.07	-0.10	0.50
Decision Making	0.06	-0.16	0.44
Eigenvalue	2.18	2.07	1.18

**Appendix Table 3: Means for Variables included
in the Analysis**

	Mean
Individual level variables (N=27,365)	
Age at Marriage	17.39
Log of adjusted per cap. Expenditure	9.80
Age	35.28
Age at puberty	13.73
Urban Residence	0.30
Caste/Religion	
Upper Caste Hindu	0.22
Other Backward Castes	0.36
Dalit	0.22
Adivasi	0.07
Muslim	0.11
Other Religions	0.03
Education	
No Education (Omitted)	0.49
Education 1-5 years	0.16
Education 6-9 years	0.17
Education 10-12 Years	0.12
Any college	0.05
District Level Variables (N=495 urban/rural sections of district)	
Wage Employment	0.17
High prevalence of dowry	0.29
Log of wedding expenditure	11.41
Mean on gender empowerment index	4.18
Any access to cash	0.85
Name on home title/rental papers	0.17
Prevalence of purdah	0.52
Prevalence of separate eating pattern	0.48
Mean of physical immobility index	0.84

App. Table 4: State Level Coefficients from Hierarichal Linear Models
(Uttar Pradesh Omitted)

	Model 1	Model 2	Model 3	Model 4	Model 5
Jammu & Kashmir	1.92 **	1.69 **	2.11 **	1.41 **	1.17 **
Himachal	1.22 **	1.22 **	1.30 **	0.17	0.17
Uttarkhand	0.71 **	0.84 **	0.67 **	-0.17	-0.08
Punjab	2.20 **	2.08 **	2.17 **	1.24 **	1.01 **
Haryana	0.51 *	0.40	0.48	0.14	-0.02
Delhi	1.65 **	1.68 **	1.58 **	1.12 **	1.03 **
Bihar	-0.86 **	-0.81 **	-0.76 **	-0.79 **	-0.61 *
Jharkhand	0.49	0.56	0.66	0.18	0.39
Rajasthan	-0.41	-0.37	-0.19	-0.40	-0.27
Chhatisghar	-0.28	0.52	-0.08	-0.84 **	0.14
Madhya Pradesh	-0.31	0.29	-0.22	-0.50 *	0.14
Northeast	3.00 **	3.22 **	2.94 **	1.85 **	1.96 **
Assam	3.32 **	3.49 **	3.32 **	2.96 **	2.99 **
West Bengal	1.13 **	1.23 **	0.95 **	0.46	0.27
Orissa	1.56 **	1.76 **	1.66 **	1.27 **	1.47 **
Gujarat	1.31 **	1.45 **	1.24 **	0.52	0.67 *
Maharashtra & Goa	1.00 **	1.31 **	1.08 **	0.03	0.37
Andhra Pradesh	-0.18	0.34	0.08	-1.19 **	-0.40
Karnataka	1.08 **	1.31 **	1.06 **	-0.11	0.08
Kerala	2.70 **	2.45 **	2.50 **	1.44 **	0.70
Tamilnadu	2.21 **	2.47 **	2.22 **	0.91 **	1.20 **

Changes in coefficients for state level effects from HLM models shown in Table 5

* p <= 0.05 ** p <= 0.01